

57. The network system of claim 30,

wherein the plurality of access points are arranged at known locations in a geographic region, the method further comprising:

the first access point providing geographic location information indicating a  
5 known geographic location of the portable computing device; and

determining an access level for the portable computing device after receiving the identification information;

wherein said providing network access comprises selectively providing network access to the portable computing device based on the known geographic location of the  
10 portable computing device and the determined access level.

58. The network system of claim 30, wherein one or more of the plurality of access points are operable to:

determine an access level for the portable computing device after receiving the  
15 identification information; and

provide data received from the portable computing device to a destination based on the determined access level.

59. The network system of claim 58, wherein, in providing the data, said one  
20 or more of the plurality of access points are operable to:

provide the data to one or more resources on the network to allow the portable computing device access to the one or more resources on the network if the access level is a first access level; and

provide the data to a destination for external access out of the network to only  
25 allow the portable computing device access to other networks if the access level is a second access level;

wherein, if the access level is the second access level, the data is not provided to the one or more resources on the network.

60. The network system of claim 30, wherein each of the access points is operable to assign a wireless communication channel for communication between the first access point and the portable computing device.

5 61. The network system of claim 30, wherein one or more of the access points are operable to assign the wireless communication channel based on one or more of:  
the identification information received from the portable computing device,  
the determined wireless service provider, or  
a determined access level for the portable computing device, wherein said access  
10 level is determined by one of said one or more of the access points after receiving the identification information.

62. A method for providing roaming features on a wireless network system, wherein the wireless network system includes a plurality of access points coupled to a  
15 network, the method comprising:

a first access point receiving identification information from a portable computing device in a wireless manner, wherein the identification information indicates a wireless service provider of a plurality of possible wireless service providers;

determining a wireless service provider for the portable computing device after  
20 receiving the identification information;

the first access point receiving data from the portable computing device in a wireless manner; and

providing the data received from the portable computing device to a destination based on the determined wireless service provider.

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63. The method of claim 62, wherein said first access point is operable to accommodate subscribers of each of the plurality of possible wireless service providers.

64. The method of claim 63, further comprising:

the first access point recognizing a System ID (SID) of a plurality of possible SIDs, wherein each of the plurality of possible SIDs is associated with a respective one of the plurality of possible wireless service providers.

5           65.    The method of claim 64, further comprising:  
            the first access point maintaining associations between the plurality of possible SIDs and the plurality of possible wireless service providers.

            66.    The method of claim 64, further comprising:  
10          the first access point maintaining associations between the plurality of possible SIDs and a plurality of active subscribers.

            67.    The method of claim 63, further comprising:  
            the first access point broadcasting a plurality of possible SIDs, wherein each of the  
15          plurality of possible SIDs is associated with a respective one of the plurality of possible wireless service providers.

            68.    The method of claim 62, wherein said first access point is operable to  
            function as a wireless service provider access point for each of the plurality of possible  
20          wireless service providers.

            69.    The method of claim 62, wherein said first access point comprises  
            computer software which implements a plurality of virtual access points, wherein each  
            virtual access point corresponds to one of the plurality of possible wireless service  
25          providers, and wherein each virtual access point provides network access services to the  
            corresponding wireless service provider.

70. The method of claim 69, wherein each virtual access point provides access point functionality implemented in software, wherein each virtual access point appears as a physical access point to the portable computing device.

5 71. The method of claim 69, wherein each virtual access point (AP) executes a wireless protocol stack.

72. The method of claim 71, wherein the wireless protocol stack comprises an IEEE 802.11 wireless protocol stack.

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73. The method of claim 69, wherein each virtual access point (AP) includes an Extended Service Set ID (ESSID), and wherein each ESSID corresponds to one of the plurality of possible wireless service providers.

15 74. The method of claim 62, wherein the wireless network system is a distributed wireless network system.

77. The method of claim 62, wherein the network system is useable by subscribers of each of the plurality of possible wireless service providers.

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76. The method of claim 62, further comprising:  
maintaining and storing a usage amount by the portable computing device;  
wherein the determined wireless service provider charges for access by the portable computing device to the network.

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77. The method of claim 62, wherein the network system includes a memory medium which stores a data structure comprising a list of identification information and a corresponding list of the plurality of possible wireless service providers; and

wherein said determining the wireless service provider for the portable computing device includes accessing the memory medium and using the received identification information to determine the wireless service provider.

5           78.    The method of claim 62, wherein the plurality of access points are maintained by a first wireless service provider; and

              wherein the identification information indicates a second wireless service provider.

10           79.    The method of claim 62, wherein the identification information comprises a System ID, wherein the System ID uniquely identifies the wireless service provider of the plurality of possible wireless service providers.

              80.    The method of claim 62, wherein the identification information comprises  
15    an Extended Service Set ID (ESSID), wherein the ESSID uniquely identifies the wireless service provider of the plurality of possible wireless service providers.

              81.    The method of claim 62,  
              wherein the plurality of access points are arranged at known locations in a  
20    geographic region, the method further comprising:

              the first access point providing geographic location information indicating a known geographic location of the portable computing device;

              wherein said providing network access comprises selectively providing network access to the portable computing device based on the known geographic location of the  
25    portable computing device.

              82.    The method of claim 62,  
              wherein the plurality of access points are arranged at known locations in a geographic region, the method further comprising:

the first access point providing geographic location information indicating a known geographic location of the portable computing device; and

determining an access level for the portable computing device after receiving the identification information;

5        wherein said providing network access comprises selectively providing network access to the portable computing device based on the known geographic location of the portable computing device and the determined access level.

83.     The method of claim 62, further comprising:

10        determining an access level for the portable computing device after receiving the identification information;

the first access point receiving data from the portable computing device; and

providing the data received from the portable computing device to a destination based on the determined access level.

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